



WICHITA, KANSAS
 Pool Improvements
 MINISA PARK
 CITY OF WICHITA



CASEY JOHN STEINER
LICENSE #19423
Date: 8-14-20 Job #: 1820529
Drawn: CDW Checked: MST

ELECTRICAL
DETAILS AND
RISER DIAGRAM

SP-E3
Water's Edge Aquatic Design
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RISER DEMO WORK NOTES:

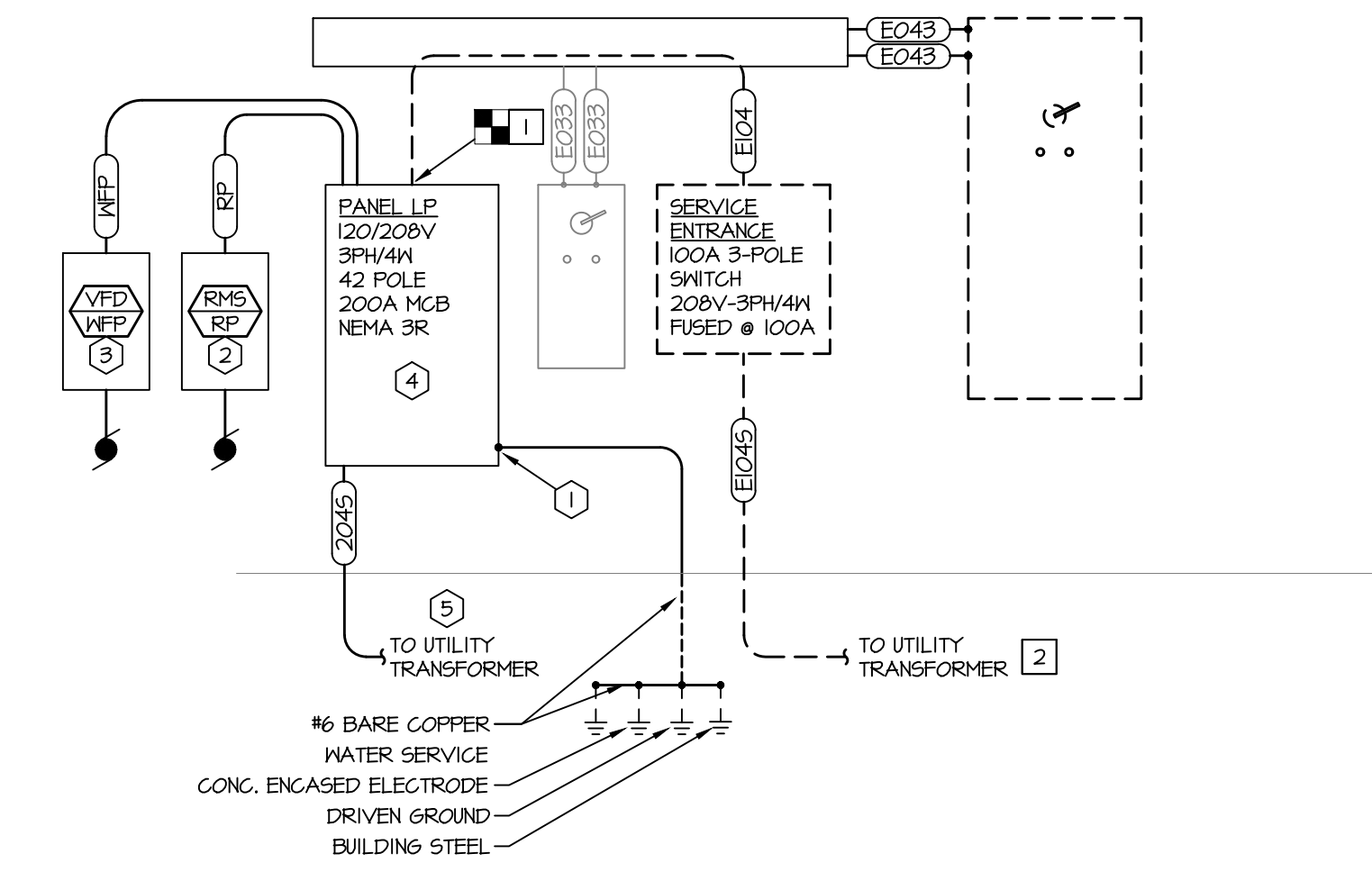
- MOTOR STARTER, WIREWAY, & FEEDERS - DISCONNECT MOTOR, MOTOR STARTER, AND FEEDERS ASSOCIATED WITH EXISTING PUMP. EXISTING WIREWAY SHALL BE REPLACED.
- SERVICE ENTRANCE - REMOVE EXISTING SERVICE ENTRANCE FEEDER BACK TO EXISTING TSKVA UTILITY TRANSFORMER. COORDINATION REMOVAL WITH ELECTRICAL UTILITY. PREPARE TRENCH FOR INSTALLATION OF NEW SERVICE ENTRANCE FEEDER.

RISER NEW WORK NOTES:

- GROUNDING - VERIFY SERVICE ENTRANCE EQUIPMENT IS GROUND PER THE GROUNDING ELECTRODE SYSTEM REQUIREMENTS SET FORTH IN NEC 250.50. ANY BARE GROUNDING ELECTRODE CONDUCTOR THAT IS OXIDIZED SHALL BE REPLACED WITH AN INSULATED GROUNDING ELECTRODE CONDUCTOR IN SCHEDULE 90 PFG CONDUIT.
- COMBINATION MOTOR STARTER - PROVIDE COMBINATION MOTOR STARTER AND FEEDER AS SHOWN.
- PUMP/VEQ - PROVIDE FEEDER FOR PUMP WITH INTEGRAL VFD.
- PANEL LP - CONTRACTOR SHALL PROVIDE NEW SERVICE ENTRANCE RATED 200A MCB, 120/208V, 22KAIC, 42 POLE REPLACEMENT NEMA 3R PANELBOARD. EXISTING DOWNSTREAM FEEDERS SHALL BE RE-USED.
- SERVICE ENTRANCE - PROVIDE NEW SERVICE ENTRANCE FEEDER AS SCHEDULED. NEW FEEDER SHALL FOLLOW THE SAME PATH AS THE REMOVED SERVICE ENTRANCE FEEDER.

FEEDER SCHEDULE:

- E1045 (4)#3 IN 1-1/4" CONDUIT
- E203 (3)#3/0 & #6G, IN 2-1/2" CONDUIT
- E104 (4)#3 & #6G, IN 2" CONDUIT
- E043 (3)#8 & #10G, IN 3/4" CONDUIT
- E033 (3)#10 & #10G, IN 1/2" CONDUIT
- Z045 (4)#3/0 IN 2" CONDUIT
- RP SEE COMBINATION MOTOR STARTER SCHEDULE
- VFP SEE VARIABLE FREQUENCY DRIVE SCHEDULE



1 Electrical Riser Diagram
Scale: None

VARIABLE FREQUENCY DRIVE SCHEDULE								
208 VOLT / 3 PHASE								
MARK	DESCRIPTION	HP	LOAD	OCPD AMPS	POLES	NEMA ENCL.	CONDUCTORS	NOTES
VFP-VFP	WATER FEATURES PUMP	5	6.015	40	3	4X	(3) #10 & #10G, IN 1/2" C.	-

GENERAL NOTES (APPLIES TO ALL ABOVE):

- VFD SHALL BE DANFOSS, MODEL #VLT AQUA OR EQUIVALENT APPROVED BY ENGINEER PRIOR TO BID. CONTRACTOR SHALL VERIFY VFD CLEARANCES PRIOR TO ORDERING. ALTERNATE DRIVE MANUFACTURERS WILL NOT BE ACCEPTED WITHOUT WRITTEN APPROVAL FROM ENGINEER.
- OCPD AMPACITIES ARE LISTED FOR FUSES/CIRCUIT BREAKER.
- VFD SHALL HAVE INTEGRAL FUSED DISCONNECT.

COMBINATION MOTOR STARTER SCHEDULE									
208 VOLT / 3 PHASE									
MARK	DESCRIPTION	HP	LOAD	POLES	STARTER SIZE	CONTROL P.B.	HOA PILOT	CONDUCTORS	NOTES
CM5-RP	RECIRCULATION PUMP	15	22.405	3	2	X	X	X	(3) #4 & #6G, IN 1" C.

GENERAL NOTES (APPLIES TO ALL ABOVE):

- PROVIDE COMBINATION MOTOR STARTERS AS SCHEDULED. REFERENCE DETAILS ON SHEET SP-E2 FOR ADDITIONAL INFORMATION.
- STARTERS SHALL BE SOFT-START TYPE.
- STARTERS SHALL BE IN NEMA 3R ENCLOSURE.

PANEL LP (REPLACEMENT)									
DESCRIPTION: 200A MCB		100% Neutral Bus		VOLTAGE: 120/208V, 3PH, 4 WIRE					
22 KAIC RATING		TOTAL CONNECTED LOAD:		55kW+ 164A					
DEMANDED LOAD CONTINUOUS:		56kW+ 167A							
NO	LOAD (W)	LOAD DESCRIPTION	AMP SIZE	AMP PHASE	LOAD DESCRIPTION	LOAD (W)	NO		
1	1000	0-ZONE	1	20	B	20	FILTERS R11 LTS + RCPT	1500	2
3	500	DIAL EARTH FEEDER	1	20	B	20	1 POLE LT	1500	4
5	500	FR LTS + OFFICE RCPT	1	20	C	20	1 OUTSIDE LTS	1500	6
7	500	RCPT CONCESSION + SODA	1	20	A	20	1 SPARE	0	8
9	1000	UNKNOWN	1	20	B	20	1 SODA ASH AGITATOR	1000	10
11	500	LEVEL TRANSMITTER	1	20	C	20	1 FLOW METER, MOTOR VALVE	1000	12
13	1000	CONCESSION LTS + SODA	1	20	A	20	1 SODA ASH FEEDER	1000	14
15	1000	REFRIGERATOR	1	20	B	20	1 RCPT - IRRIGATION CONTROL	180	16
17	-	SPACE	-	-	C	-	SPACE	-	18
19	-	SPACE	-	-	A	-	SPACE	-	20
21	-	SPACE	-	-	B	-	SPACE	-	22
23	-	SPACE	-	-	C	-	SPACE	-	24
25	7461	PUMP - RECIRCULATION	3	100	A	-	SPACE	-	26
27	7461	(15 HP)	-	-	B	-	SPACE	-	28
29	7461	-	-	-	C	-	SPACE	-	30
31	1000	PUMP - POOL FEATURES	3	40	A	-	SPACE	-	32
33	2005	(5 HP)	-	-	B	20	1 RCPT - EXHAUST FANS	1872	34
35	2005	-	-	-	C	20	1 RCPT - CHLORINE PUMP	180	36
37	1000	IT RACK	1	20	A	20	1 RCPT - FLOW METER	180	38
39	1120	WEST DECK RECEPTACLE	1	40	B	20	1 RCPT - CHEM CONTROLLER	180	40
41	1120	EAST DECK RECEPTACLE	1	40	C	20	1 SPARE	0	42

* PROVIDE NEW BREAKER AS INDICATED.
** PROVIDE NEW GFI BREAKER AS INDICATED.